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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,358	10/28/2003	Masashi Kitazawa	032047	2558

38834 7590 06/17/2004

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EXAMINER

RAEVIS, ROBERT R

ART UNIT	PAPER NUMBER
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2856

DATE MAILED: 06/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/694,358	Applicant(s) KITAZAWA ET AL.	
	Examiner Robert R. Raevis	Art Unit 2856	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 May 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 3-5, (6/3-5), 7-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6/1, 6/2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/9/04</u> . | 6) <input checked="" type="checkbox"/> Other: <u>EXHIBIT "A"</u> .                      |

### DETAILED ACTION

Election of Group I is acknowledged.

Claim 2 and 6/2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 2, the "triangular" (line 2) embodiment (relating to Figure 7's pyramid/cone embodiment) is not consistent with the "plate-like" (line 4 of claim 1) embodiment (of Figure 6). Claim 2 has limitations directed to two (2) separate embodiments.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2 are rejected under 35 U.S.C. 102(b) as being anticipated by Toda et al.

Toda et al teach (Figures 6A, 6B, 6C, 7A) a SPM cantilever 1102 including: upper (support) portion visible in Figure 7A, lever portion, and a probe portion formed at the lowermost (free) portion of the lever portion, wherein: the probe portion has a plate-like form 1103, the probe portion having a sharpened terminal end portion 1106,1107, the terminal end portion having a length greater than the plate thickness (visible in Figure 6C) and is reduced in thickness toward a tip of the terminal end portion, and the

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tip is located inwardly of the planes extended from the front and back sides of a base portion of the plate like probe portion. (See "EXHIBIT "A")

As to claim 1, the view of Figure 7A may be deemed to be a "front" view, thus illustrating the "front" side. Also, as that side is the "front" side, the thickness of the plate is perpendicular to the front, and thus is along the horizontal axis of Figure 6C.

As to claim 2, note the triangular shape of element 1103, and that the two sides (front and back) that define the tip are angled relative to the horizontal bottom of the probe portion where section 1103 meets section 1102.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6/1,6/2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toda et al.

Toda et al state that the section 1103 is made of "an elastic material" (col. 9, line 39), but does not expressly state that it is silicon nitride.

As to claim 6/1, it would have been obvious to employ silicon nitride as the material because Toda teaches (col. 9, line 27; col. 8, lines 12-15) use of silicon nitride to provide for a tip that provides both reduced wear and greater reproducibility of measurement.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

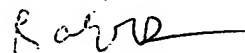
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Matsuyama '017 teaches an angled tip in Figure 8D.

Matsuyama '653 teaches an angled tip in Figure 15.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert R. Raavis whose telephone number is 571-272-2204. The examiner can normally be reached on Monday to Friday from 7am to 4pm. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



RAEVIK

